

VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)**EPA 8260B 1996****Page 1 of 3**

Facility Name: _____ VELAP ID: _____

Assessor Name: _____ Analyst Name: _____ Inspection Date: _____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
<i>Records Examined:</i> SOP Number/ Revision/ Date _____ Analyst: _____ Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
Were PTFE and rubber components of the GC/MS system avoided?	3.1				
Were analytical areas, sample storage areas, and analyst clothing isolated from sources of Methylene Chloride?	3.5				
Did the oven temperature program include a post-analysis bake out to ensure that semi-vol hydrocarbons were volatilized?	3.9				
Were samples and quality controls introduced into the system in the same manner?	7.1				
Did BFB tune meet acceptance criteria before sample analysis began?	7.3.1 7.5.2				
Were Calibrations verified by BFB, and a calibration check ($\pm 20\%$), a Systems Performance Check Compound, and a method blank each 12-hour analytical shift?	7.4				
Did the Internal Standard retention times not change by more than 30 seconds from that of the calibration mid-point during runs?	7.4.6				
Did the Internal Standard area counts not change by a factor of two (-50% to +100%) during any run?	7.4.7				
Were all samples and standards allowed to come to ambient temperature before analysis?	7.5.3				
If it was necessary to analyze both aliquots of a split sample, was the second aliquot analyzed within 24 hours?	7.5.4				
Were samples that were composited cooled to 4°C or less to minimize volatilization of analytes?	7.5.7.2				
When ions from a sample saturated the detector, were reagent water blanks analyzed next to be free from contamination?	7.5.11.1				
Notes/Comments:					

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Were samples that exceeded the initial calibration range diluted and reanalyzed?	7.5.11				
Qualitative Analysis					
Were the relative retention times(RRTs) of sample components within ± 0.06 RRT units of the RRTs on the standard component?	7.6.1.2				
Did the relative intensities of characteristic ions agree within 30% of these ions in the reference spectra?	7.6.1.3				
When structural isomers were identified independently, did they have GC resolution such that the heights of their valleys were less than 25% of the sums of the two peak heights?	7.6.1.4				
Where structural isomers did not have sufficient GC peak resolution, were they identified as isometric pairs?	7.6.1.4				
Quantitative Analysis					
Were quantitations of compounds based on the internal standards with retention times nearest to those analytes?	7.7.1				
Did the reports of quantitations indicate if values were either estimates or quantitated from internal standards.	7.7.4				
Quality Control from EPA 8000C					
Was the instrument performance checked every 12-hour analysis period according to some sort of QC program?	8000C 9.2.1				
Did recalibration of the instrument take place when calibration verification acceptance criteria could not be achieved?	8000C 9.2.5				
Were method blanks analyzed prior to analyzing any samples?	8000C 9.2.6				
Were method blanks prepared at a frequency of 5% or every 20 samples?	8000C 9.2.6.1. 8260B 8.4				
Notes/Comments:					

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Were method blanks and LFMs subjected to the same procedures as samples?	8000C 9.2.6.4 9.7.8				
Were method blanks determined to be lower in analyte concentration than some target dictated by a QC program?	8000C 9.2.6.5				
Were r^2 s/correlation coefficients/coefficients of determinations of calibration curves all ≥ 0.99 or the RSDs of calibration analytes $\leq 20\%$?	8000C 9.3.2 11.5.2				
Were calibration verifications within $\pm 20\%$ of the responses calculated during initial calibrations?	8000C 9.3.6 11.5.1				
When the facility or new analysts began this method or there were significant changes in instrumentation were IDC's performed?	8000C 9.4.1				
Did IDC's consist of the mean recoveries of at least four standards falling within 70% to 130% and the calculation of standard deviations?	8000C 9.4				
Was a LFM/LFMD pair or Sample/Duplicate/LFM set prepared and analyzed with each batch of up to 20 samples?	8000C 9.5. 8260B 8.4				
Were LFMs and surrogate recovery values within 3 standard deviations of their average percent recoveries?	8000C 9.7.3				
Were LCS samples consisting of reagent matrix spiked to the same concentration as LFMs prepared and analyzed with each batch? (Not second-source)	8000C 9.5. 8260B 8.4				
Were failed data included in Control Limit calculations to avoid "censored data sets?"	8000C 9.7.8				
Notes/Comments:					